



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|------------------------------------|---------------------|------------------|
| 09/534,196 | 03/24/2000 | Christian Francois Michel Dujarric | Q58472 | 2963 |

7590 06/24/2003

Sughrue Mion Zinn Macpeak & Seas PLLC
Robert J Seas
2100 Pennsylvania Avenue N W
Washington, DC 20037-3202

| |
|----------|
| EXAMINER |
|----------|

KOCZO JR, MICHAEL

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3746

27

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/534,196

Applicant(s)

DUJARRIC, CHRISTIAN
FRANCOIS MICHEL

Examiner

Michael Koczko, Jr.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-18 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7, 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 3746

DETAILED ACTION

Applicant's arguments filed on March 20, 2003 have been fully considered but they are not persuasive.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the conical nozzle body of claim 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 14 is objected to because of the following informalities: In line 5, "thrust" should read --throat--. In claim 5, line 2, "3" should read --three--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 2 to 7 and 14 to 18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Art Unit: 3746

The claims recite that the separation triggering elements have a spacing sufficient so as to produce distinct zones of jet separation to form a three-dimensional separation of the flow.

However, the specification fails to disclose what is the minimum sufficient spacing which would produce the desired zones of jet separation.

Claim 14 recites "at least two mutually spaced separation triggering elements".

However, there is clearly a limit on the number of mutually spaced separation triggering elements which would produce the desired effect. There is no mention of this limit in the specification.

Applicant's invention purports to be an improvement over US Pat. No. 3,925,982 (Mueller) and the specification states that the injection points of Mueller are closely spaced and therefore do not produce a three-dimensional separation of the flow. This raises the question of what is the minimum sufficient required spacing for forming a three-dimensional separation of the flow.

Furthermore, whether or not three-dimensional separation of the flow occurs is dependent not only on the spacing and location of the injection points, but also other factors such as the pressure of the injection fluid. This places an undue burden on one of ordinary skill in the art to make and use the invention.

Claims 2 to 7 and 14 to 18 are also rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Because of the basis of these claims on an inadequate disclosure, the scope thereof cannot be clearly ascertained.

Art Unit: 3746

In claim 14, lines 1 and 2 from the bottom are not understood. It is not seen how the spacing of the separation triggering elements affects whether or not injection occurs therethrough.

Claim Rejections - 35 USC § 102

Claims 2, 3, 4, 6, 14, 16, 17 and 18 are rejected under 35 U.S.C. 102(b) as being structurally anticipated by either of Mueller, Rannie et al., Abbott or Fitzgerald. Each of these references discloses a plurality of mutually spaced separation triggering elements positioned on an injection cross section of the divergent nozzle body perpendicular to the axis of the nozzle body, and a means for simultaneously injecting fluid through the mutually spaced separation triggering elements of said injection cross section of the divergent nozzle body. Whether or not a three dimensional separation of flow occurs is merely a desired result, and is furthermore dependent on operational parameters which are beyond the scope of the claims, such as injection pressure, for example. This recitation of a desired result is therefore not patentably limiting.

Applicant argues that “the spacing is claimed in the context of a means plus function element and thus the functional aspect of this claim must be examined with respect to the prior art.” The “means” must be construed with regard to the structure which is disclosed in the specification. The structure as disclosed is merely a plurality of injection nozzles, which is readable on the applied references.

Applicants arguments are merely allegations of differences between the operation of the nozzles of Mueller and Rannie et al. Applicant fails to point out how the claims define structurally over the prior art.

Art Unit: 3746

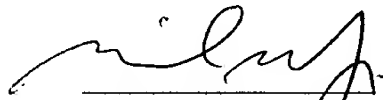
Claims 5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by either of Mueller or Rannie et al.

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Fitzgerald.

Claims 8 to 13 stand withdrawn from further consideration as being drawn to a non-elected species.

Any inquiry relating to the status of this application or proceeding should be directed to the Customer Service Office whose telephone number is 703-306-5648.

Any inquiry relating to patent applications in general should be directed to the Patent Assistance Center at 1-800-786-9199.



Michael Koczo, Jr.
Primary Examiner
Group Art Unit 3746

M. Koczo, Jr./mnk
June 24, 2003
TEL 703-308-2630
M-F 7:30 to 16:00
FAX 703-872-9302
After Final FAX 703-872-9303